BRUHAT BANGALORE MAHANAGARA PALIKE,
BANGALORE

DETAILED ESTIMATE

NAME OF WORK: CONSTRUCTION OF DRAINS CULVERTS AND CEMENT CONCRETE ROAD AT DASARAHALLI KARAGADAMMA TEMPLE OPPOSITE ROAD IN WARD NO-06 (THANISANDRA)

EST COST : 65.00 LAKHS

SUBMITTED TO:

EXECUTIVE ENGINEER
BYATARAYANAPURA DIVISION

Bruhat Bangalore Mahanagara Palike
Executive Engineer Byatarayanapura Division

Name of Work:Construction of Drains culverts and cement concrete road at Dasarahalli Karagadamma Temple Opposite road in ward no-06 (Thanisandra)

Sl No	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work.Loading and Unloading of Stone Boulder/Stone aggregates/ Sand/Kankar/Moorum. (Tipper 5.5 m3) (V-I.No 1.4,Page No-5 PWD SR 2021-22)								
	Basic Rate	186.00							
	Loading And Unloading	118.00							
		304.00							
	Area Weightage 10%	30.40							
	Total Rate	**334.40**							
	Rcc Drain								
	Anugraha Complex road	1	80.00	1.10	1.00	88.00			
	Shivanna Apartment road	1	72.10	1.10	1.00	79.31			
	For Culverts	1	8.50	1.50	1.00	12.75			
						180.06	**Cum**	**186.00**	**33,491.16**
	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork shall be paid separately) **Mix 1:3:6 (M10)** Using 40 mm nominal size graded crushed coarse aggregates (V-1, P.No-15, I No-2.1.3 of PWD SR 2021-22) issue rate dated 07-07-2022								
	Basic Rate	**5554.00**							
	Area Weightage 10%	555.40							
	Total Rate	**6109.40**							
	Rcc Drain								
	Anugraha Complex road	1	80.00	1.10	1.00	88.00			
	Shivanna Apartment road	1	72.10	1.10	1.00	79.31			
	For Culverts	1	8.50	1.50	0.15	1.91			
	Concrete Road								
	Anugraha Complex road	1	80.00	5.10	0.15	61.20			
	Shivanna Apartment road	1	72.10	5.00	0.15	54.08			
	Cross road	1	119.00	5.00	0.15	89.25			
						373.75	**Cum**	**6109.40**	**2283372.98**
	Supplying, Fitting and Placing un-coated **TMT bar Reinforcement** in sub-structure complete as per Drawing and Technical Specifications.(V-III, I.No 13.1 Page No 99, PWD SR 2021-22) issue rate dated 09-11-2022								
	Basic Rate	**78662.00**							
	Area Weightage 10%	7866.20							
	Total Rate	**86528.20**							

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
For RCC Drain, 60kg/cum	1	47.91	60.00		2874.69			
For RCC Culvert, 90kg/cum	1	4.00	90.00		359.55			
					3.23	**Tn**	**86528.20**	**279852.97**
Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) **M20 Design Mix** Using 20 mm nominal size graded crushed coarse aggregates (V-1,P.No.17, I.No.2.4.2 of PWD SR 2021-22) issue rate dated 07-07-2022								
Basic Rate	5968.00							
5% for Centring	312.80							
	6280.80							
Area Weightage 10%	628.08							
Total Rate	**6908.88**							
Rcc Drain Raft								
Anugraha Complex road	1	80.00	0.90	0.15	10.80			
Shivanna Apartment road	1	72.10	0.90	0.15	9.73			
Rcc Drain Wall								
Anugraha Complex road	2	80.00	0.15	0.60	14.40			
Shivanna Apartment road	2	72.10	0.15	0.60	12.98			
					47.91			
Culvert Raft								
	1	8.50	1.20	0.20	2.04			
Culvert Wall								
	2	8.50	0.23	0.50	1.96			
					4.00			
					51.91	**Cum**	**6908.88**	**358615.78**
Providing and fixing **precast reinforced cement concrete covering slabs of 10Cm thick** made of M20 with OPC cement,with 20mm and down size graded granite metal coarse aggregate @0.70 mixed, Inculding providing and removing centering, shuttering, strutting propping etc., for edges of slabs with TMT steel (Fe500) cost of all materials, labour, all lead and lift, HOM of machinery, curing, including cost of reinforcement etc., complete as directed by the Engineer in charge of the work								
Data Rate	**2072.00**							
Anugraha Complex road	1	80.00	0.90		72.00			
Shivanna Apartment road	1	72.10	0.90		64.89			
					136.89	**Sqm**	**2072.00**	**283636.08**
Providing and fixing **RCC precast cover slab of 230mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
Data Rate	**5037.00**							
For Culverts	1	8.50	1.20		10.20			
					10.20	**Sqm**	**5037.00**	**51,377.40**

Sl	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
	Earth work in surface **excavation by mechanical means** for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work ((V-I, P.No-8, I No-1.12 of PWD SR 2021-22)								
	Basic Rate	**65.00**							
	Area Weightage 10%	6.50							
	Total Rate	**71.50**							
	Concrete Road								
	Anugraha Complex road	1	80.00	5.10	0.40	163.20			
	Shivanna Apartment road	1	72.10	5.00	0.40	144.20			
	Cross road	1	119.00	5.00	0.40	238.00			
						545.40	**Cum**	**71.50**	**38,996.10**
	Construction of **Granular Sub-Base** of required grading as per design mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401 .(V-III, I No-4.1V,P No-19,KPWD SR 2021-22)								
	Basic Rate	**2347.00**							
	Area Weightage 10%	234.70							
	Total Rate	**2581.70**							
	Concrete Road								
	Anugraha Complex road	1	80.00	5.10	0.15	61.20			
	Shivanna Apartment road	1	72.10	5.00	0.15	54.08			
	Cross road	1	119.00	5.00	0.15	89.25			
						204.53	**Cum**	**2581.70**	**528022.19**
	Providing and constructing un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base, with 43 grade cement or any other type as per Clause 1501.2.2 **M30 (Grade),** coarse and fine aggregates conforming to IS:383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weigh batcher using approved mix design, laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including construction joints, , primer, sealant , curing of concrete slabs for 14- days, and water finishing to lines and grade as per drawing and technical specification clause 1501 with all lead, lifts, loading & unloading charges, cost and conveyance of all materials, labour, equipments etc., complete. as per the directions of the Engineer-in-charge of the work.(V-III, P.No-138,I No-20.29, KPWD SR 2021-22) issue rate dated 07-07-2022								
	Basic Rate	**6512.00**							
	Area Weightage 10%	651.20							
	Total Rate	**7163.20**							
	Concrete Road								
	Anugraha Complex road	1	80.00	5.10	0.15	61.20			
	Shivanna Apartment road	1	72.10	5.00	0.15	54.08			
	Cross road	1	119.00	5.00	0.15	89.25			
						204.53	**Cum**	**7163.20**	**1465053.48**

	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
10	Cutting transverse contraction joints 3 to 4 mm wide and depth 60mm. .in concrete slab using concrete cutting machine with diamond studded saw within 48 hours of casting of bay / slab etc. complete including subsequent widening of the groove 8 to 10 mm. wide at top having depth of 15 mm. as directed by Engineer incharge as per MoRTH 602.6.3.(V-III, P.No-146,I No-4, KPWD SR 2021-22)								
	Basic Rate	70.00							
	Area Weightage 10%	7.00							
	Total Rate	77.00							
	Concrete Road								
	Anugraha Complex road	20	5.10			102.00			
	Shivanna Apartment road	18	5.00			90.00			
	Cross road	29	5.00			145.00			
						337.00	m	77.00	25,949.00
11	Providing to contraction joints polysuphide sealent (Pouring grade) confirming to BS : 5212 - 1989 into sawed groove widened at top for sealent reservoir of specified size and shape as per detailed drawing including fixing Polyethylene foam backer rod of required diameter (appraox. 25% larger than the initial 3 mm.to 4 mm. joint) overlaid with bond breaking tape as per detailed drawing. Item includes cleaning the joints with water jet / air compressor and allowing joint to become thoroughly dry before sealent is applied and applying primer. (A) Contraction and longitudinal joints (15 mm. deep x 8 mm.wide) as per MoRTH 602.6.3.(V-III, P.No-147,I No-5, KPWD SR 2021-22)								
	Basic Rate	165.00							
	Area Weightage 10%	16.50							
	Total Rate	181.50							
	vide item no. 10					337.00			
						337.00	m	181.50	61,165.50
12	Cost of Haulage Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km (V-III Page No.3, Item No.1.4 A of PWD SR 2021-22) Rs. 65.00 table								
	Basic Rate	12.00							
	8KM Lead = 12*8	96.00							
	Area Weightage 10%	9.60							
	Total Rate	105.60							
	Qty frm Item No-1		180.1	1.28		230.48			
	Qty frm Item No-7		545.4	1.28		698.11	TA		
						928.59	t.Km	105.60	98,058.98
								Total Construction Cost	5507591.61
								Sub Total-1	5507591.61
								18% GST for Construction Cost	991366.49
								Sub Total -2	6498958.10
								Utility Shifting,Miscellaneous and Rounding off	1,041.90
								GRAND TOTAL	6500000.00

Technical Sanction Accorded For Rs. 65.00 lakhs
Head of A/C P0541
CER NO :177A Dt: 06/01/23

70/22-23 Dt. 27/03/2023

AE/JE

EE (BTP. Div.)

Certificate

1. The workspot was inspected and works is found to be necessary.
2. The area comes within the Bruhat Bangalore Mahanagara Palike limits.
3. The rates adopted based on the PWD SR,Bangalore circle for year 2021-2022, Data rates and issue rates dated 07-07-2022, 09-11-2022

Assistant Engineer
BBMP Bangalore

Asst. Executive Engineer,
BBMP Bangalore

Executive Engineer,
BBMP Bangalore